

AICT 5 – eProject

Project planning for ICT.

Introduction

A project of any size needs effective planning to maximise success.

Managing eProjects are no different. In fact effective project management is essential to the completion of any ICT based project. eProject managers need to be skilled in applying their knowledge and eSkills to solve problems and be able to manage available resources.

Teamworking skills are essential. Self-discipline to complete individual tasks is a prerequisite.

eBusinesses need good eProject managers.

Software requirements

To facilitate the successful completion of this unit, candidates will need access to the following:

- The Internet
- Web authoring software
- Pdf writing software
- Standard Office software including a spreadsheet package
- Graphics packages with vector and bitmap tools
- Project management software

Content

	Focus	Amplification
		Candidates should be able to:
AICT 5.1	Background	<p>Describe project management in terms of the organisation, planning and control of the stages of the project development cycle.</p> <p>Maintain an individual diary to produce a comprehensive record.</p> <p>Work with others to analyse a given scenario. Produce an individual project proposal and project plan.</p> <p>Work individually to organise, plan and control the management of a given problem using project management tools.</p> <p>Work individually to produce a model to solve a given problem.</p>
AICT 5.2	Stakeholders	
	Client	Describe the roles and responsibilities of the client organisation, senior manager and end user in the project development cycle.
	Project team	Describe the roles and responsibilities of the project manager, developer, reviewer and supplier in the project development cycle.
AICT 5.3	Analysis	Work with others to
	Client requirements	Establish an understanding of the client's requirements for the project through the analysis of a given brief.
	Stakeholders	Identify the stakeholders who will be affected by the project through the analysis of a given brief.
	Timescale	Establish a plan and identify deadlines to achieve the client's requirements.
	Costs	Prepare costings for the proposed project using given financial information.

	Roles and responsibilities	When applicable, allocate roles to suit individual strengths and take responsibility for a delegated role.
	Formal meetings	<p>Follow standard procedures for the organisation of formal meetings including preparation of agenda and minutes.</p> <p>Contribute appropriately during formal meetings in the development of the project proposal and keep records of the decisions made.</p>
AICT 5.4	Project proposal	<p>Work individually to</p> <p>Use the outcomes of the group analysis to prepare a project proposal and a project plan.</p>
AICT 5.5	Project definition	<p>Work individually to:</p> <p>Amend the project proposal and project plan as necessary to suit revised client requirements.</p> <p>Develop the project proposal to formally define the scope of the project detailing the purpose of the project, stakeholders, measurable objectives (outcomes, quality and completion), constraints and deadlines.</p>
AICT 5.6	Project organisation	
	Procedures	Set up and use procedures for storing and protecting project information, tracking and monitoring progress.
	Stages	<p>Define the project in terms of the stages of analysis, design, prototyping, testing, producing documentation and final handover and identify the activities that will be carried out in each stage.</p> <p>Recognise the relationships between these activities.</p>
	Planning	Use appropriate software to produce a detailed plan showing overall timescale, project stages, the activities in each stage, timings for each activity, contingency time and review dates.

Tracking and monitoring	Check progress against the plan, assess the impact of any delays arising and adjust the plan to minimise their effect.
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Produce multiple copies of the plan as necessary to illustrate progress throughout the project.

Project management software	Make effective use of project management tools such as Gantt charts, PERT charts, critical path analysis, network diagrams and time lines to facilitate the progress of the project.
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AICT 5.7 The Project

Design

Design the structure of a numerical model in terms of layout, fonts, colour, borders, headers and footers and conditional formatting.

Design the rules for the numerical model.

Design the calculations and processes required to implement these rules.

Design data entry facilities and validation rules to ensure the accurate entry of data into the numerical model.

Design suitable methods of presenting results on screen and/or on paper such as charts and graphs, tables and exporting to other applications.

Development

Implement the design using suitable numerical modelling software to produce a prototype for testing and review.

Revise the prototype in response to feedback obtained from testing.

Implement the revised design to create the final product.

Testing

Produce a test plan and test data designed to fully test the numerical model.

Implement the test plan and present the results.

AICT 5.8 Review

Carry out a review of the solution against initial objectives and success criteria of the project definition.

Evaluate the completed model and consider potential future improvements.

Evaluate the effectiveness of the project management software tools used in the course of the project.

Describe strengths and weaknesses in own performance in the design and development stages of the project.

Identify problems encountered during the design and development stages of the project and suggest how these could be avoided in future.

AICT 5.9 ePortfolio

Make use of a given eportfolio to present the required evidence of group work, project management, modelling and review.

AICT 5.10 Standard ways of working

Managing your work

Recognise the need to use sensible filenames and version control, setting up organised folder structures and choosing appropriate file formats.

Keeping information secure

Recognise the need to save work regularly, make back ups, limit access and use effective virus protection.

Quality assurance

Recognise the need to spell check and proof read work.

Assessment of this unit

This is a mandatory unit for the A Level Single and A Level Double Awards.

The assessment of this unit is external, through the use of a Controlled Assignment written by the WJEC.

Controls for the Controlled Assignment

A guidance document will be sent to centres outlining the specific details of the Controlled Assignment. The information below provides a general framework.

Task Taking

Centres will have a window during which the Controlled Assignment may be taken. The window will be of 4 weeks duration and set in November and December for the January series and during March and April for the summer series. Actual dates for the window will be advised annually. Candidates will not have sight of the tasks until the centre commences the 15 hour task taking period during the window. Candidates will need to complete the Controlled Assignment under close supervision. No work may be taken into or out of the controlled environment.

Task Marking

Candidate work is to be marked internally and externally moderated.

Annotation of Controlled Assignments

This should be achieved by:

- (i) Annotation of the candidate's work within the submission of the candidate's Controlled Assignment (on-line or CD)

OR

- (ii) A separate attachment to the submission of the candidate's Controlled Assignment that provides a rationale for the awarding of candidate marks (on-line or CD)

OR

- (iii) A written document provides a rationale for the awarding of candidate's marks (to accompany candidate work sent on CD)

Annotation is to help the moderator understand more fully how the teacher has arrived at the mark awarded to the candidate.

Internal Moderation of Controlled Assignments

Centres must ensure that careful moderation is carried out especially where more than one teacher is responsible for the marking of the Controlled Assignment. This is necessary to ensure uniformity of standards within a centre. Where internal moderation is necessary the teacher assuming overall responsibility for this process should provide a written outline of the procedures that have been adopted for the external moderator.

External Moderation of Controlled Assignments

The moderation of teacher assessment will be provided by inspection of the Controlled Assignments by WJEC. Centres will be informed of the submission date for the Controlled Assignment in the published Examinations Timetable and the name of their moderator will be issued in the term prior to accreditation.

The proportion of work to be moderated will be of the following order.

Total Number of Candidates	Work to be submitted (Numbers relate to rank order)
1 - 10	All
11 - 19	The first and every second (1, 3, 5, 7, etc.)
20 - 29	The first and every third (1, 4, 7, 10, etc.)
30 - 59	The first and every fourth (1, 5, 9, 13, etc.)
60 - 99	The first and every fifth (1, 6, 11, 16, etc.)
100 - 199	The first and every tenth (1, 11, 21, 31, etc.) plus additional folders to make a sample of 20.

Where more than one teacher has responsibility for marking the sample chosen should reflect this.

As a result of the moderation, the marks of candidates may be adjusted to bring the centre's marks into line with the national standard. If required, the moderator will ask for additional samples of work and if necessary, the work of all candidates may be called for and externally moderated regardless of entry numbers. In this case, all of the Controlled Assignments will be sent to the moderator.

It assists the moderation process considerably if the final marks of all the candidates are submitted to the moderator in rank order. It is only if this is done that the moderator can be fully aware of the full impact of any scaling.

In the event of concern over the awarding procedures, the normal appeals process will apply.

Authentication

Candidates will be required to confirm in writing, with any exceptions stated, that the work has been completed independently. This will be achieved by signing the appropriate part of the Controlled Assignment.

Teachers will be required to confirm in writing that, to the best of their knowledge, all the work submitted for moderation, with any exceptions stated, is the candidate's own unaided work. This will be achieved by signing the appropriate part of the Controlled Assignment.

Recording of Controlled Assignment Marks

Marks will be recorded on "C forms" and distributed to centres. The maximum mark to be recorded is 100.

Submission of Controlled Assignments

Candidate work may be sent in CD format or on-line.

Retention of Controlled Assignments

Centres need to retain the Controlled Assignments until the term following the Examination Series in which the Controlled Assignment was undertaken.

CANDIDATE REQUIREMENTS

Candidates will need to

- Work with others to
 - analyse the requirements of a given problem situation
 - to identify clear aims and objectives for the system
- Work individually to
 - Respond to changes in client requirements
 - Create a solution to the revised problem
 - Use project management software to track and monitor their progress

Candidates will need to work with others to produce

- An initial project proposal identifying
 - the client's requirements
 - all stakeholders
 - timescales and costs

Candidates will need to work individually to produce

- Revised project proposal
- Detailed problem definition
- Design, create, test and evaluate a computer model

All evidence, including the model itself, will be presented in the form of an ePortfolio.

The assessment objective weightings for this unit are as follows:

AO1	ICT Capability	30%
AO2	Knowledge and understanding	15%
AO3	ICT Problem solving	25%
AO4	Evaluation	30%

Assessment Grid

The following grid is to be used in conjunction with the WJEC devised assignment.

Section	Assessment Objective				Total
	AO1	AO2	AO3	AO4	
Project Definition			15		15
Project organisation	10	10		10	30
The project	15	5	10		30
Review				20	20
Presentation	5				5
Totals	30	15	25	30	100

PROBLEM DEFINITION - 15 marks			
Mark Band 1	Mark Band 2	Mark Band 3	
<p>The candidate has presented a problem definition that includes</p> <ul style="list-style-type: none"> • Notes on the group work carried out in preparation for the project, outlining the organisational procedures used and their own contribution • A definition that updates the scope and purpose of the project as stated in the group project proposal taking some account of given changes to the client's requirements. • Objectives for the project which indicate the success criteria to be used to assess the final outcomes. 	<p>The candidate has undertaken some analysis of the given problem and presented a problem definition that includes</p> <ul style="list-style-type: none"> • A summary of the group work carried out in preparation for the project, which outlines the organisational procedures used by the group and clarifies their own contribution to the work. • A definition that accurately re-defines the scope and purpose of the project as stated in the group project proposal to take account of given changes in the client's requirements. • Some clear and measurable objectives for the project which define the success criteria to be used to assess the final outcomes. 	<p>The candidate has undertaken a comprehensive analysis of the given problem and presented a problem definition that includes</p> <ul style="list-style-type: none"> • A clear and concise summary of the group work carried out in preparation for the project, which explains the organisational procedures used by the group and clarifies their own contribution to the work. • A comprehensive project definition that accurately re-defines the scope and purpose of the project as stated in the group project proposal to take full account of given changes in client's requirements. • A set of clear and measurable objectives for the project which clearly define the success criteria to be used to assess the final outcomes. 	
0 – 7 marks	8 – 11 marks	12 – 15 marks	

PROJECT ORGANISATION - 30 marks			
Mark Band 1	Mark Band 2	Mark Band 3	
<p>The candidate has produced some evidence of project organisation and has</p> <ul style="list-style-type: none"> • Set up and use procedures for storing project information that aid retrieval and data security • Used appropriate software to produce a plan showing overall timescale, most project stages, some activities in each stage and timings for each identified activity • Used the plan to communicate progress during the project • Used the plan to review and record changes in anticipated progress and account for initial contingencies • Made some use of appropriate project management tools to progress the project 	<p>The candidate has produced evidence of project organisation and has</p> <ul style="list-style-type: none"> • Described how to set up and use procedures for storing project information that aid retrieval and data security • Used appropriate software to produce a plan showing overall timescale, project stages, activities in each stage and timings for each identified activity • Used and updated the plan to clearly communicate progress during the project • Made some evaluation of the likely impact of delays arising and has adjusted the plan to offset their effect and account for initial contingencies • Made use of appropriate project management tools to facilitate the progress of the project 	<p>The candidate has produced clear evidence of project organisation and has</p> <ul style="list-style-type: none"> • Explained how to set up and use procedures for storing project information that aid retrieval, promote monitoring and support data security • Used appropriate software to produce a detailed plan showing overall timescale, activities in each stage, timings for each activity, contingency times and review points • Used and updated the plan as necessary to clearly communicate progress throughout the project • Fully evaluated the impact of delays arising and has adjusted the plan to minimise their effect and account for initial contingencies • Made effective use of a range of appropriate project management tools to facilitate the progress of the project 	
0 –14 marks	15 – 23 marks	24 – 30 marks	

THE PROJECT - 30 marks			
Mark Band 1	Mark Band 2	Mark Band 3	
<p>The candidate has</p> <ul style="list-style-type: none"> Produced a design for a numerical model that provides some indication of the layout and identifies some of the required content Designed some rules and identified some of the calculations for use in the model making some use of facilities of the applications package Included proposals for data entry facilities that are intended to facilitate data entry Indicated methods for presenting some required outputs Developed a working numerical model based on rules that make some use of formulae and functions Produced a prototype and carried out limited testing Produced a limited plan for testing, tested the model for correct operation and presented some results with some comments 	<p>The candidate has</p> <ul style="list-style-type: none"> Produced a design that for a numerical model that provides proposals for layout, formats, user interaction and some graphical content Designed rules and identified calculations for use in the model, making some use of functions and formulae Included proposals for data entry facilities that are intended to facilitate accurate data entry Included proposals for presenting the required outputs Developed a working model that is well formatted and based on rules that make use of formulae and functions Produced prototypes, carried out testing and made some refinements Produced a plan for testing the model for correct operation and presented results with suitable comments 	<p>The candidate has</p> <ul style="list-style-type: none"> Produced a comprehensive design for the structure of a numerical model that provides detailed proposals for layout, formats, user interaction and graphical content Designed effective rules and identified calculations for use in the model, making good use of functions and formulae Included proposals for data entry facilities and validation rules intended to facilitate data entry Included clear proposals for the effective presentation of all required outputs Developed a numerical model that is fit for purpose, well formatted and based on rules that make effective use of formulae and functions Produced prototypes, carried out effective testing and refined the model accordingly Produced a comprehensive plan for testing the model for correct operation and presented all results with informed commentaries 	
0 –14 marks	15 – 23 marks	24 – 30 marks	

REVIEW - 20 marks			
Mark Band 1		Mark Band 2	Mark Band 3
<p>The candidate has</p> <ul style="list-style-type: none"> • Made some evaluative comments about the model identifying some good and less successful features • Evaluated the main management tool used to progress the project • Commented on own performance in organising and managing the project identifying some strengths and/or weaknesses • Commented on the value of the preliminary group and the organisational methods used identifying some strengths and/or weaknesses • Provided evidence that conveys meaning but lacks detail. Little use of specialist vocabulary. The work may contain inaccuracies. 		<p>The candidate has</p> <ul style="list-style-type: none"> • Evaluated the completed model against performance criteria and identified good and less successful features of the model and made some suggestions for improvements • Evaluated the management tools used to facilitate the progress of the project • Described both strengths and weaknesses in own performance in managing the project and has made some suggestions for improvements • Evaluated the value of the preliminary group work, identifying both strengths and weaknesses of the organisational methods used and included some suggestions for improvements • Provided evidence that is structured clearly to communicate meaning. Technical vocabulary is used accurately. The work will contain relatively few errors. 	<p>The candidate has</p> <ul style="list-style-type: none"> • Evaluated the completed model against performance criteria, identified good and less successful features of the model and described significant potential improvements • Evaluated in detail the effectiveness of the management tools used to facilitate the progress of the project • Described both the strengths and weaknesses in own performance in organising the project, including valid suggestions for future improvements • Evaluated the value of the preliminary group work, identifying both strengths and weaknesses of the organisational methods used and included valid suggestions for improvements • Provided evidence that is well structured and clearly expressed. Specialist terms are used with ease and accuracy. The work will be largely error free.
0 –10 marks		11 – 15 marks	16 – 20 marks

PRESENTATION - 5 marks			
Mark Band 1	Mark Band 2	Mark Band 3	
<p>The candidate has presented</p> <ul style="list-style-type: none"> Some of the specified evidence, linked to the template provided, with few obvious errors and in the required formats 	<p>The candidate has presented</p> <ul style="list-style-type: none"> Most specified evidence, linked to the template provided, without obvious errors and in the required formats 	<p>The candidate has presented</p> <ul style="list-style-type: none"> All specified evidence, linked to the template provided, accurate and in the required formats, with no unnecessary work included 	
0 – 2 marks	3 – 4 marks		5 marks